Strategic Insights

International Post Corporation

Payments in e-commerce

THE NATURAL PARTNER FOR THE POSTAL INDUSTRY

Contents

Introduction

Although it may appear to have been around forever (indeed its origins stretch back to 1979[1]), online shopping (or 'e-commerce'[2]) is a mere teenager, just 15 years old, but one for which many predict a very long life. A child of the internet revolution, it was born around 1995 with the emergence of some of the more iconic names in online shopping. It showed precocious promise in its infancy, and buoyed by the dot com bubble thought it could run even before it could crawl. The bursting of that bubble at the turn of the millennium and the demise of some of the more hyped e-commerce start-ups, like boo.com, tripped the sector up somewhat and instilled a sobering measure of reality. As it learned to walk on steadier feet, e-commerce has since carved out a share of retail at around 5%, but has remained very much the little brother of bricks-and-mortar retailers. Now in its adolescence, it is expected to undergo a vigorous and intense growth spurt that will allow it take its place among adult retail channels: speaking at IPC's 'Shop@Home' conference[3] eBay President and CEO John Donahoe predicted the sector would grow to 15-20% of all retail over the next three years. E-commerce across the world is entering a boom, perhaps nowhere more so than in China, where the market was valued at $38.5bn in 2009 and expected to grow by about 105% year-on-year[4].

In the early days of e-commerce both the concept and practicalities of online shopping presented barriers to consumer uptake. However over the past ten years those in the e-commerce value chain, whether e-retailers, payment service providers, or logistics and delivery companies, have invested significantly in overcoming those barriers. Innovations in attractive web-shop design, intuitive and user-friendly functionalities, sophisticated shipping and delivery options, and an expanded range of products available for purchase have all conspired to bring ever more shoppers online. In parallel the extensive roll-out of broadband connections in developed markets and greater consumer familiarity with the concept of

1 In 1979 British inventor Michael Aldrich invented a transaction-processing system, the precursor to online shopping, by connecting a domestic television and a processing computer via a telephone line.

2 While 'e-commerce' strictly speaking covers all electronic commercial transactions, including electronic stock trading, electronic funds transfer and other non-physical commercial transactions, for the purpose of this paper we assume 'e-commerce' to be synonymous with consumer online shopping and use it throughout in that sense.

3 IPC Annual Conference 'Shop@Home', San Francisco, 21 May 2010

4 'Chinese E-Commerce Tops $38.5 Billion: What Comes Next?' by Joel Backaler published on www.readwriteweb.com, 19 April 2010

online shopping have also contributed to increasing experimentation and adoption, which is building the consumer trust in online shopping that is an imperative for the sector to flourish.

Several challenges to consumer confidence – real and perceived – do however remain, which must be overcome for e-commerce to reach its predicted potential. E-retailers are uniquely positioned to take advantage of a global consumer base, and e-commerce opens the whole world to consumers heretofore largely restricted to shopping within their home market. If the e-commerce world can manage to push open the doors of cross-border online shopping, the potential benefits to both retailer and consumers – and all other parties along the e-commerce value chain, including posts – is immense. However this potential for cross-border online shopping is not being realised, mostly due to consumer concerns over payment processes and delivery and returns options, as identified by recent research undertaken by IPC[5]. Confirming these consumer concerns, mystery shopping research in Europe[6] suggests that almost two thirds (61%) of cross-border transactions in Europe could not be completed due to difficulties in registering on web-sites located in third countries, lack of adequate cross-border payment or delivery options. In particular, on about 60% of the merchant sites where it was possible to pay with a credit card the online merchant refused payments from non-domestic cardholders. Moreover in 52% of all cases where cross-border home delivery was requested, this was refused by the merchant site.

In summary, while the opportunities for growth in the realm of e-commerce are enormous, they will not be realised unless the fundamental challenges to consumer confidence are tackled. This paper sets out to examine specifically the issues, options and innovations in consumer online shopping payment options (e-payments), for both domestic and cross-border transactions. It is imperative that the postal industry gain a keen understanding of the innovations in e-payments and the opportunities open to them to drive convergence between payment and delivery partners from the e-retailers perspective.

This paper will analyse the current situation in online payments, examining both consumer and retailer needs. It will then discuss the use of traditional offline payment methods online – specifically the issues around the use of credit and debit cards in e-commerce payments. Thereafter alternative e-payment methods, specifically designed for the purposes of e-commerce, will be discussed, and innovations in the payments regulatory landscape will be detailed. It will then provide

5 IPC Cross-Border E-Commerce Report, IPC, Brussels, May 2010

6 Mystery Shopping Evaluation of Cross-Border E-Commerce in the EU , YouGovPhsyconomics, London, October 2010

an overview of the postal operator e-commerce landscape, detailing e-payment systems that have been introduced by select posts, and will end with a short description of innovations in e-payments.

Given the wide scope of the subject matter, the paper will limit its discussion to those areas outlined above that are relevant to postal operators. To that end the paper will discuss only e-payments related to the purchase of physical goods and will not discuss micro-payments, which are typically for digitally-delivered services and goods. Nor does space allow for an in-depth analysis of issues related to the business of e-payments such as pricing structures, which merit a paper of their own.

Overview of current situation

A multiplicity of e-payments solutions currently exist, with more coming online as e-commerce expands. The proliferation of differing systems and payment options testifies to a lack of convergence in the global e-payments sector, a normal situation given the immaturity of the industry. The payment options available in different markets are a result of legacy (offline) payment infrastructures, local cultural and consumer preferences and legislative differences. Add to this the competing online payment solutions provided by different players, whether proprietary systems of the larger e-retailers, those of banks, or of other payment service providers. Indeed e-commerce is revolutionising the very nature of the payments sector, whereby non-financial institutions are now becoming extremely important players in the payments processing industry.

In developing e-payments systems providers must respond to the needs of two key stakeholders: the consumers making the payments, and the vendors selling the goods purchased. Consumers first and foremost require e-payment systems to be secure. They then need them to be simple and convenient, and also require systems which allow for hassle-free refunds. This is true of consumers e-shopping domestically as cross-border.

E-retailers require the assurance that they will receive payment for the goods or services they provide. They also require e-payment systems with sufficiently robust online identification mechanisms and which provide secure processes for handling confidential personal data. E-retailers favour payment systems that can be scaled across multiple markets, and that are cost effective.

Payment challenges for the distance sellers and e-retailers are fundamentally different to those of traditional retailers primarily due to the physical distances between sellers and buyers and this leads to higher security risks for all. Loss of confidence due to fraud, misuse of financial personal information and personal identity are the most important threats to creating a trusted online transaction.

In short, e-payment solutions needs to be low cost, secure, and simple to use and implement.

Snapshot of e-payment methods

The following table provides an at-a-glance overview of the most common methods of paying for online purchases used around the world today. Some methods are more popular in certain regions than others. While all are used for online purchases, not all can be classified as 'e-payments' because in the case of cash on delivery, payment can be made physically rather than online. The classification includes only those payment options for macro-payments: additional payment options exist for micro-payments, which are not the subject of this paper.

The classification proposed here (Figure 1) is based on the Innopay Online Payment 2010 report and has been complimented with additional information. The classification distinguishes between 'conditional reach' and 'unconditional reach' payments. 'Conditional reach' indicates that these payment methods are not accessible to all buyers. Most often, a buyer 'opt-in' process is required prior to accessing the payment method eg: payment for service or upfront deposit of money in an electronic purse. 'Unconditional reach' describes payment methods which are available to all buyers in a geographical area. Typically these represent offline payment methods which are adapted for use online.

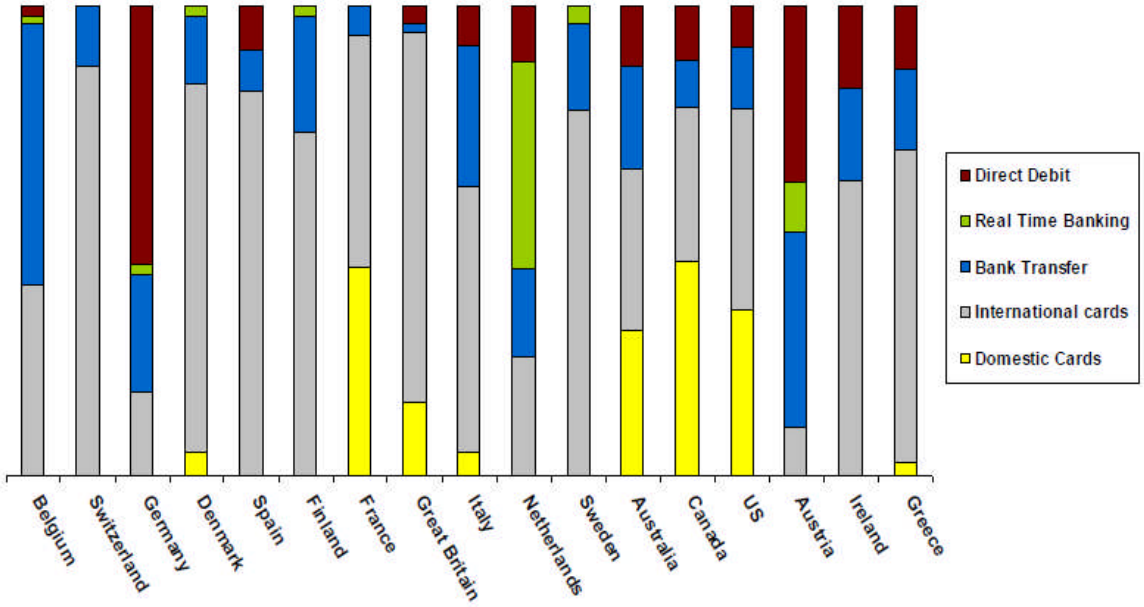
Figure 1: E-commerce payment options (macro-payments only)

UNCONDITIONAL REACH	CONDITIONAL REACH
Bank Transfer	Online Banking Payment
Debit Card	Credit Card
Direct Debit (Online / Offline)	Virtual Credit Card
Prepaid Card	Online Escrow Services
Cash on Delivery	Online e-Wallet
Card on Delivery	
Money Transfer	

Online Payment Landscape

Card payments (credit and debit) dominate the electronic payments landscape in the majority of developed online shopping markets (Figure 2). The landscape in individual markets is shaped by the growth of internet banking, the adoption of Payment Service Providers (PSPs) by online retailers, market preference for credit or debit and the ease of use of direct debit for single payments.

Figure 2[7]: Preferred e-commerce payment methods for select market



7 Source: The SEPA ePayments Framework in the context of the greater ePayments landscape 15 June 2010

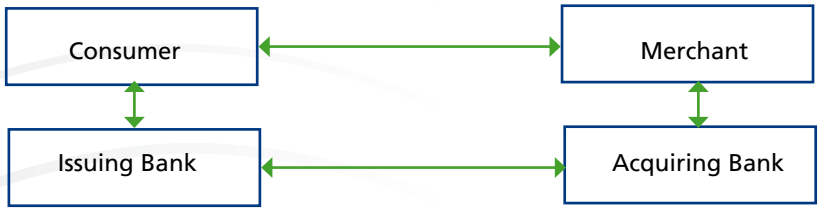
The legacy of plastic: CNP transactions

Card (credit and debit) payments are currently the most widespread method used for online purchases, due in large part to card ubiquity among consumers which offered e-retailers a ready-made solution for accepting payments in the early days of e-commerce when no other solutions were available.

Card transactions are usually built upon the four-party model, (see Figure 3 below) the parties being: the cardholder making the purchase; the bank that has issued the card to the cardholder (the issuing bank); the merchant that sells the goods or services to the consumer; and the merchant's bank which 'acquires' the transaction (the acquiring bank). While payment cards provide certain security features and consumer advantages such as ease of refunding, it is important to recall that they were not created for the online selling environment. The level of authentication of face-to-face card transactions where the identity of the cardholder is verified at the time of purchase cannot be fully replicated in the online environment. The online payment process by card is defined as Card Not Present (CNP) and as there is no signature of the cardholder, e-retailers face increased liability in the form of chargeback fees in cases of disputed or fraudulent transactions[8].

The same four-party model is used in the case of CNP transactions as offline, point-of-sale (POS) transactions.

Figure 3: Four-party model used in CNP transactions



8 Chargeback fees vary by bank and are charged on a transaction basis – typically between €10 and €20 per chargeback.

CNP security features

To overcome the intrinsic weakness of a CNP transaction additional screening processes have been introduced over time that provide additional security for all parties but reduce convenience and ease of use of credit and debit cards online for consumers. Fraud screening can include[9]:

- Referral list checks. These are internal lists based on black, grey and white lists of credit card numbers built up over time or bought from a reliable, specialised source.
- IP address of transaction originating country. Many merchants block IP addresses from certain countries.
- Shopper session check: counts the payment behavior and attempts within a certain time frame. A velocity check can be a part of this check procedure.
- Consistency checks. A mixed set of checks, eg on email address, name, location.

A new development is in/out of wallet challenges, where during the order process buyers are asked specific questions to test authentication and validity against a certain profile known with the merchant or third party.

Major card companies now provide additional security online features tied to the consumer's card and bank account for additional authentication. Examples include MasterCard's '3D-Secure Code' and Visa's 'Verified by Visa'. Typically, once the credit card details have been entered and the consumer verifies the transaction on the retailer's site, a secure link between the consumer's PC and their card issuer is created where the consumer can password-authenticate each individual purchase directly to the card-issuing bank. This double authentication includes an electronic signature which enhances payment security for consumers and merchants. The identity of the cardholder is ensured through PIN identification which means that merchants benefit from a payment guarantee from card issuers in cases of payment cancellations by consumers. Merchants who adopt these programmes are no longer liable for CNP chargebacks resulting from consumer's claiming they did not authorise the purchase. Merchant liability in cases of non-delivery of goods or

9 Online payments 2010 – Increasingly a global game, Innopay, 2010, p. 54

poor quality goods remains. Merchants who sign up for these additional services will also typically benefit from lower transaction fees on verified transactions compared to non-verified card transactions.

"If consumers are not confident, demand will grow at a slower rate. So we must tackle these concerns right now if the online market is to grow at its full potential"

John Fingleton, Chief Executive, Office of Fair Trading

CNP and data retention

In an Internet environment e-retailers know very little about the identity of consumers. The merchant carries responsibility for financial losses and penalties if they have failed to check against misuse of stolen cards or misuse of personal information (identity theft). The need to limit their exposure to the fraudulent practices from consumers is one of the key drivers behind e-retailers' desire to store user card data: linking the consumer's credit card information to the customer's computer information (IP address). This provides e-retailers with an added identification feature, however the system is far from foolproof: some e-retailer sites automatically decline second transactions from the same consumer if logged in from a different computer, even if there is no question of the transaction being fraudulent, and in any case a computer's IP address represents just one identifying feature and should not alone be the basis for transaction approval or denial.

In order to overcome consumer resistance to storing of personal information and card detail e-retailers typically present this to consumers as providing them with a more hassle-free shopping experience in the case of return purchase visits. E-retailers usually provide consumers with an opt-in scheme whereby they elect to have said data stored, and in some countries and regions consumer data protection and privacy legislation has made the requirement for e-retailers to obtain prior consumer consent mandatory. However Snow Valley discovered that more and more websites were saving consumer credit card details without requesting authorisation to do so: in their 2010 UK research, on 14 sites out of 130 online test orders no opt-out was available and credit card details were automatically retained[10].

CNP: consumer perceptions

Many consumers distrust the idea of having their personal payment details stored online in the belief that they can be hacked and misused by fraudsters. Some indeed mistrust the idea of giving out card details online for the very same reason, even if those details are not retained by the merchant. A survey by Ernst & Young in the Netherlands showed that only 6% of respondents in that market perceive credit cards as the most trusted payment method for online shopping,

10 E-commerce retail delivery report 2010, Snow Valley, London, 2010

whereas 31% said it was the most untrustworthy payment method[11]. In its own research the UK's Office of Fair Trading found that, in a market with a relatively strong credit card culture, almost a third (30%) of internet users said that they do not shop online because they do not trust the security of online card transactions[12].

Mistrust of CNP transactions due to fear of fraud represents a real barrier to consumer uptake of e-commerce, especially where alternative payment methods are not ubiquitous. Findings such as those by Snow Valley will only serve to reinforce consumer concerns over data security and generate negative consumer perceptions of e-commerce generally.

CNP fraud in figures

Figure 4 compares credit and debit card fraud across different markets as a proportion of e-commerce payments[13]. Fraudulent card transactions as a proportion of e-commerce transactions are overall relatively low, nowhere in the countries examined reaching the 1% mark, however research by Innopay suggest that they have of late increased as a proportion of all online transactions: there has been a decrease in the total volume of online fraud but online CNP fraud is evolving in the opposite direction[14].

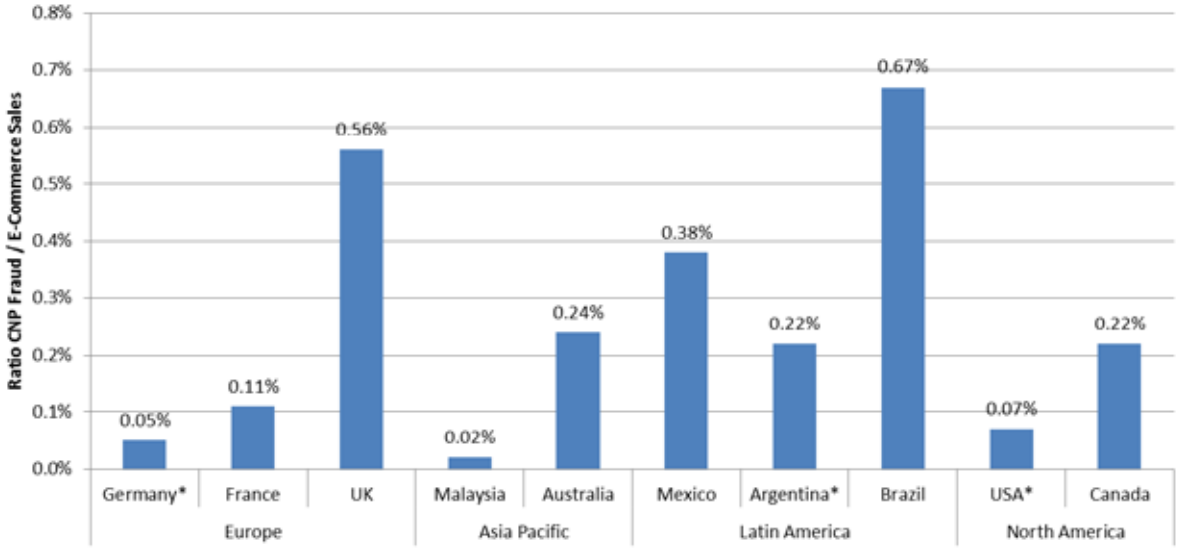
11 ICT Barometer over online winkelen, Ernst & Young, Amsterdam, 28 April 2010

12 Findings from consumer surveys on Internet Shopping: A comparison of pre and post study consumer research, Office of Fair Trading, London, May 2009 (OFT1079). The Office of Fair Trading (OFT) is a non-ministerial government department whose mission is to make markets work well for consumers.

13 Global Collect 2010: Growing Online Sales Without Losing Out to Fraudsters, p. 15

14 Online payments 2010 – Increasingly a global game, Innopay, 2010, p. 51

Figure 4: CNP fraud as proportion of e-commerce payments, 2009[15]



* Germany: Figure does not include ELV
USA: Travel sales are not included in e-commerce sales
2008 Figures: Argentina and Mexico

Future of CNP

Going forward the attractiveness of CNP as a preferred payment method for the e-retail community and consumers is questionable. Security concerns aside, cards are an imperfect fit for e-commerce payments. At best, CNP were a circumstantially convenient rough-and-ready fix – markets with good internet access at the advent of e-commerce and those that rolled out extensive network access shortly thereafter largely overlapped with those of high card penetration (mostly, but not exclusively, industrialised developed nations of North America, Western Europe and Australasia), which meant that e-retailers could tap into a ready-made payment system when they launched. Some 15 years on that fix is looking considerably less convenient and circumstantially less relevant. For one, the picture of global internet penetration

15 Global e-Commerce: How Merchants Can Grow Online Sales Without Losing Out To Fraudsters, GlobalCollect™, Co-authored by Edgar, Dunn & Company (EDC),2010

in 2010 is very different from that of 1995, with many emerging markets having extensive consumer access to the worldwide web. Add to this the very different cultural perceptions of debt, credit and credit cards across the world. (Nor should we presume that such cultural preferences necessarily split down the industrial-emerging market divide: consumers in the Netherlands for example are notoriously debt-averse and wary of credit cards). And even after 15 years of CNP transactions the perceived security and convenience challenges still remain. The legacy of plastic is long and we certainly cannot write it off as obsolescent in the e-payments environment, however e-retailers know that cards do not represent an ideal solution and to that end have been looking to develop some of the alternative payment methods which we shall examine next.

"E-commerce is set to grow, but only for those merchants who appreciate that different consumers have different preferences when it comes to making online transactions. The logic is simple - by offering a wider range of payment systems, the more customers a site is likely to appeal to."

Nick Drew, Director e-commerce operations, ClickandBuy

Introducing alternative payment methods (APMs)

In the following sections we will discuss some alternatives to credit and debit cards. Merchants and retailers across the e-commerce industry have been slow in meeting increasing consumer demand for alternative online payment tools. Existing alternative payment schemes demonstrate that they can attract a larger and different group of buyers, especially those who are not comfortable with CNP transactions. A recent report from Javelin Research[16] shows that 54% of consumers surveyed in the US have used an alternative payment method such as PayPal, Bill Me Later, or checkout tools from Amazon or Google, while only 35% percent of the 60 or so merchants polled said they offered such payment options.

It is testament to how widespread the online use of credit cards has become that non-CNP payments are referred to as 'alternative'. Adding alternatives to credit cards certainly answers consumer demand: a 2008 survey by TrialPay[17], a transactional advertising platform specializing in digital downloads and software, found for example that two-thirds of consumers (59%) would be more likely to make purchases online if alternative payment methods to credit cards (in that case, Google CheckOut and PayPal) were available on the website in point.

Whether the growth in e-commerce is fuelling innovation in the e-payments industry or the development of more user-friendly e-payment options is promoting e-commerce is a moot point and largely academic. The relationship is likely symbiotic, and the important observation is that over the past few years new players have emerged in the e-payments sector that in replying to e-retailers and consumers needs are bringing to market not just new solutions and services but to the payments sector a whole new business model.

16 Online Payments Forecast: Alternative Payments to Go Mainstream as Consumers Seek Security and Convenience, Javelin, Pleasanton, CA, September 2007

17 2008 Alternative Payment Survey, TrailPay Inc, Mountain View, CA, 2008

Adding alternatives to credit and debit cards answers consumer needs, but also implies a series of costs to the e-retailer. There exist particular costs unique to each payment method, the detail of which will be discussed as we examine each individual alternative payment method. In an environment where everything, from visits to page views, click-paths to cart abandonment rates, is measurable, the effective value of any payment method is hugely transparent and can be easily measured against its costs. Systems that do not deliver strong ROI to e-retailers will not survive.

Over the next few pages we will analyse the main alternative payments systems currently available, but first we will examine the role of Payment Service Providers in the e-payments mix and how their emergence has transformed the payments industry.

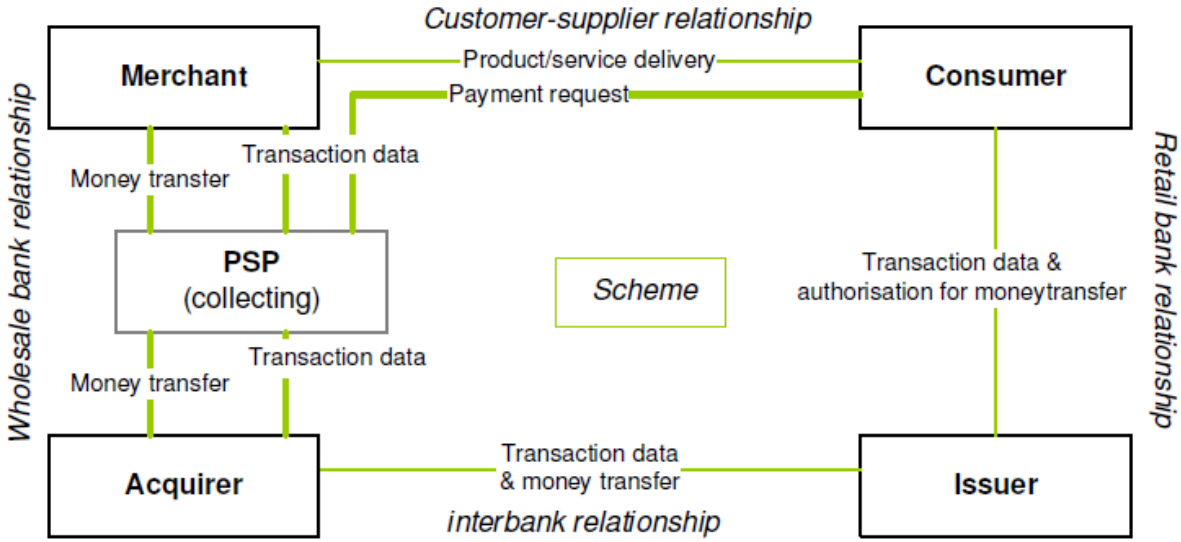
Payment Service Providers

Broadening access & facilitating cross-border payments

A Payment Service Provider (PSP) offers merchants a single gateway for the acceptance and processing of payments completed by any one of a variety of online payment methods. PSPs' critical responsibility is that of authentication: they establish the identities of both parties to a transaction and ensure that both are willing participants.

PSPs are facilitators, and often guarantors, of the movement of money in online payment schemes. In doing so they act as payment aggregators, and obviate the need for e-retailers to set up and manage a multiplicity of relationships with different financial organisations. This is important to e-retailers that want to offer their customers a range of payment options, and also to those that operate internationally, as PSPs can process payment methods from differing national systems and currencies.

Figure 6: the collecting PSP in the four-party model



PSPs can ease the distribution of monies in online transactions by facilitating connections in the four-party model, or they can also take on the role of collecting monies. A collecting PSP will aggregate payments and pay out in regular intervals to merchants in any required currency.

In Online payments 2010 – Increasingly a global game, Innopay provides a more detailed overview of the different roles PSP play in a four party payment models. A payment service provider (PSP) offers merchants online services for accepting electronic payments by a variety of payment methods including credit card and bank-based payments such as direct debit, bank transfer and real-time bank transfer based on online banking. Some PSPs provide unique services to process other next-generation methods (payment systems) including cash payments, wallets such as PayPal, prepaid cards or vouchers and even paper or e-check processing. Typically a PSP can connect to multiple acquiring banks and card and payment networks. In many cases the PSP will fully manage these technical connections, relationships with the external network and bank accounts. This makes the merchant less dependent on financial institutions and free from the task of establishing these connections directly – especially when operating internationally.

According to Innopay, PSPs offer e-retailers a variety of advantages:[18]

- Reduced administration and agreements: a single supplier for all payment methods
- Simplified payments: all monies received from a single party
- Lower costs: able to aggregate not only acquiring banks and payment methods, PSPs offer economies of scale
- Access to local payment methods in different markets
- A single settlement procedure with an agreed frequency
- Access to specialist knowledge concerning payment process
- Risk management and fraud prevention tools

18 Online payments 2010 – Increasingly a global game, Innopay, Boer, Hensen et Al, 6th edition, May 2010, p.62.

Current Alternative Payment Methods

Next we shall examine some of the major alternative payment methods in use today around the world. It would be impossible to provide a detailed and exhaustive account of all of the Alternative Payment Methods (APMs) currently in use, nor is that the scope of this paper. We shall however discuss the different types of e-payments solutions and provide a detailed analysis of some of the more popular options.

It should be borne in mind that in a period of rapid evolution in the e-payments landscape many different solutions are emerging, not all of which will survive. Many e-payments platforms are jostling with one another to establish their own predominance as the preferred solution in particular markets. The landscape is particularly fractured along market-specific lines, with solutions emerging that reflect local consumer preferences, adapt to the local regulatory framework, build on legacy platforms and payment environments or respond to other market idiosyncrasies. Some cross-border payment solutions have of course emerged, and the one that springs most readily to mind and that has perhaps the widest geographical reach is PayPal. PayPal's dominance in the cross-border e-payments sector is in large part due to its early emergence in the US, the market that dominated early developments in e-commerce. It has set something of a standard in e-payments systems, with a model that has been emulated or copied by other regional systems that have later emerged.

One of the earliest innovations in e-payments was the e-wallet, traditionally pre-paid holding wallets which consumers credit a variety of payment options, such as credit card, debit card or online bank transfer, with the credited e-wallet is then used to make online purchases. Not all e-wallets are created equal and there exist key differences in the functionalities of those. Regional variations also exist, with functionalities designed to the exigencies of specific markets. While most typically used for C2B (consumer to business) transactions, some e-wallets also enable C2C (consumer to consumer, or 'peer to peer') payments, and even B2B (business-to-business) payments, as is the case of Alipay. Examples of e-wallets include indeed Alipay, and also CashU, ClickandBuy, Click2Pay, e-port, GoogleCheckout, Kredit Pilot, Paynova, PayPal, Rapida, Webmoney and Yandex.dengi, to mention just a selection. It should be noted that while all of these function as e-wallets, some have grown as payment platforms beyond their original e-wallet function to incorporate a variety of payment mechanisms. Over the course of the following section we will examine the bigger of these, as well as other e-payments solutions and non-electronic payment solutions that are used for e-commerce. To that end we will first look at PayPal, Alipay and online checkouts as examples of payment service solutions from outside the financial services

industry; we then examine direct debit schemes and pre-paid cards before focusing on BillMeLater as an example of a credit solution alternative to credit cards. Lastly we will examine the resilience of cash on delivery as a payment option and its relevance to the e-commerce arena.

Non-financial service payment solutions

PayPal

PayPal is an account-based payment system that allows individuals and businesses with an email address to send and receive online payments securely, with the flexibility to link payments to a PayPal e-wallet, credit or debit cards or bank accounts[19]. PayPal does not require financial information to be shared between buyer and seller at the time of transaction and therefore can be seen as a clear alternative for CNP-wary consumers.

PayPal, owned by eBay, has registered considerable growth in transaction volumes in recent years, underscoring its increased popularity among consumers shopping online. In 2009 it registered a net total payments volume (TPV) of $71bn, a 19% increase on 2008, has 81 million active registered accounts globally, and supports 24 currencies in 190 markets, making it a truly global e-commerce payment solution. In 2009, the payment segment represented 32% of eBay's net revenues. While many may still associate PayPal as the payment mechanism for eBay, today more than 50% of PayPal transactions originate from non-eBay platforms.[20]

Although a minority share of PayPal's business, cross-border e-commerce is still of considerable importance, representing almost a quarter of PayPal's total TPV (about $18bn). Some 45% of PayPal's customer base is situated outside the US[21] and PayPal aims to become the global e-payments system of choice: in 2009 it shifted up a gear its efforts to that end by becoming in its own words "the first major payments platform to open up to third-party developers"[22].

19 Global Digital Economy E-Commerce and M-Commerce Trends and Statistics, Buddecomm Report, October 2009

20 All statistics from the eBay Annual Report 2009

21 Global Digital Economy E-Commerce and M-Commerce Trends and Statistics, Buddecomm Report, October 2009

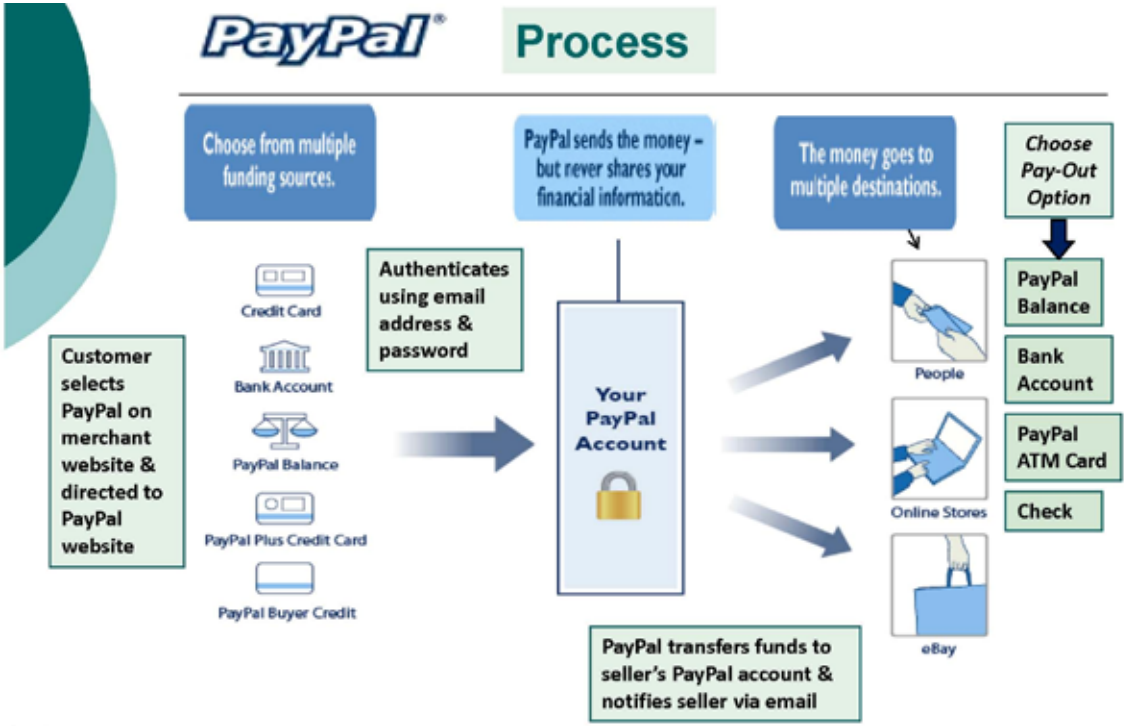
22 eBay Annual Report 2009

PayPal faces some heavyweight competition from other payment methods, such as ELV in Germany, iDeal in the Netherlands and Alipay in China. In Eastern Europe Cash on Delivery (COD) remains the preferred payment option for e-commerce transactions. However while leaders in their respective markets none of the aforementioned online payment methods can currently hope to challenge PayPal's global dominance.

PayPal's market strategy has evolved to offering fixed product pricing opportunities, enhanced merchant services, greater international expansion, developing mobile applications and more.

How does it work?

Figure 7: PayPal payment process explained



Today PayPal is active as:

- E-Wallet
- Online credit: Bill Me Later
- Payment Service Provider, by enabling consumers to link their credit cards and bank accounts to their PayPal accounts
- Mobile payments, micropayments, debit cards and co-branded credit cards all for use on and offline. The eBay mobile app for iPhone was downloaded almost seven million times as of January 2010, making it one of the top apps in the iTunes store at that time.

Fee Structure

PayPal offers online merchants an all-in-one payment processing solution that is generally less expensive than most credit card merchant accounts[23]. PayPal earns revenues from a range of fees including transaction fees, foreign exchange fees, fees from merchant payment processing services and fees when a user receives payments from outside the user's country of residence.

Fees vary in line with monthly sales (value of transactions). The higher the value of monthly sales, the lower the variable rate applied to transaction fees charged to merchants. To qualify for PayPal's merchant rates, sellers must reach qualifying levels of monthly sales volumes.

23 Overall merchant fees can range between 1-5% of the transaction value in addition to a fixed transaction fee, applied each time a card is used. The level of fees borne by individual merchants vary according to the type of merchant service account, the credit card issuer, the volume of monthly transactions as well as the nature of transactions (eg: POS, CNP etc..). Additional fees such as minimum service charges, monthly maintenance charges and invoice or statement fees are also typically applied. A more detailed analysis of these charges is beyond the scope of this paper.

PayPal fees for domestic transactions[24]

Standard rate	2.9% + $0.30 USD	
Merchant rates	Monthly Sales Volume:	Fee:
	$0.01 - $3,000.00	2.9% + US$0.30
	$3,000.01 - $10,000.00	2.5% + US$0.30
	$10,000.01 - $100,000.00	2.2% + US$0.30
	Over $100,000.00	1.9% + US$0.30

PayPal incurs costs on payments at varying levels depending on the source of the payment. Costs associated with credit card and debit card funded payments are significantly higher than bank account, Bill Me Later, or balance-funded payments.

PayPal account-to-account transactions are fee-free.

Advantages:

- Because of its complementarity with many global and local payment methods, PayPal is convenient both for consumers and merchants.
- It answers demand for an e-payments system based on web-specific tools and protocols better suited to e-commerce transactions than CNP, while allowing the flexibility to link to a bank account or credit or debit card.
- As no financial data are transmitted the system offers greater security than systems that transmit such information.
- A global solution that can facilitate cross-border e-commerce.

24 www.paypal.com

Protection against fraud for eBay buyers and sellers using PayPal in the US has been enhanced since 2008[25]. Buyers who pay for transactions on eBay.com with PayPal are protected on eligible transactions for the full amount of an item's purchase price (including original shipping) if the buyer does not receive the goods they purchased or if the goods differ significantly from what was described by the seller. Prior to October 2008, the maximum amount buyers could recover in these cases was limited $2,000. US sellers on eBay who follow specific shipping and handling practices, benefit from enhanced protection against payment reversals due to a buyer claiming unauthorised payment or item not received.

Disadvantages:

- E-retailers buy into customer services offered by a third-party when having to resolve queries or disputes relating to payment of goods and services. The e-retailer is not in full control of the timeliness and quality of this process.

- PayPal serves both buyers and sellers and in cases of disputes must manage the resolution process, which may not be at the satisfaction of one or either of the parties.

Alipay

The proprietary online payment tool developed by the Alibaba Group, a group encompassing the largest business to business marketplace (Alibaba.com) and online consumer retailer market place (Taobao) in China, Alipay's main function is to serve as the online payment provider for companies under the Alibaba Group. Alipay is an online escrow service much in the same model of the early PayPal as a proprietary e-payments scheme provided by eBay. Since its launch in 2004 AliPay has become the most popular and extensively used online payment tool for all areas of e-commerce in China, and is fast becoming the industry standard there. In 2009 Alipay became China's leading online payment service both in terms of number of users and total transaction volume: according to its own website Alipay surpassed the 300 million user milestone in March 2010 and was ranked as the fifth e-commerce-related website by CR-NetRatings in 2010[26]. According to the statistics released by Alipay[27] more than 460,000 e-commerce companies in China use Alipay as payment option.

25 eBay Annual Report 2009

26 360 Degree View of China's Consumer 2010, Nielsen, 2010, p.73

27 www.alipay.com

Figure 8: Alipay's cross-border purchase foreign currency processes

Alipay supported by four major banks in China: Industrial and Commercial Bank of China, China Construction Bank, Agricultural Bank of China and China Merchants Bank, charges no service fees to buyers and sellers on Taobao's online marketplace.

In late 2007 Alipay started to offer Chinese consumers the possibility to pay online for goods from abroad denominated in 12 foreign currencies, including US dollars, Japanese yen, euros and Hong Kong dollars, and pay for them in Chinese yuan. This real-time service enables a buyer to pay in yuan for an international purchase; Alipay withdraws the payment from the user's account and uses it to purchase foreign currency which is remitted to the international e-retailer. Since 2009 Alipay has been collaborating with Bank of China and China Construction Bank to provide currency conversion services for cross-border transactions[28].

In April 2010 Alibaba formally launched AliExpress[29], a service aimed at supporting its small business segment. Through this new e-commerce platform, international buyers are able to access services from small wholesale and retail businesses, primarily from mainland China, willing to fulfill smaller-quantity orders for immediate shipment. Future plans include opening the platform to international suppliers. Payment facilities include instant online transactions via PayPal[30] as well as the escrow service provided by Alipay to protect buyers and sellers.

Alibaba has entered into a strategic alliance with UPS[31] which it has designated as its preferred carrier, integrating UPS shipping and tracking services into the AliExpress platform. Additional functionalities supporting security include address validation, screening, compliance and licensing information. A logistics and shipping service launched in 2011, Fulfillment by AliExpress, enables small and medium businesses to access discounted international shipping rates of up to 30%, from a range of delivery partners, through multiple order consolidation[32].

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28 'Alibaba Group forms strategic alliance with Bank of China on online payment' Alibaba Group press release, Beijing, 23 July 2009

29 'Alibaba.com Launches AliExpress to Bring Industry Leading Security, Choice, Flexibility, Convenience and Profitability to Small Wholesalers and Retailers', Alibaba Group press release, Hong Kong, 26 April 2010

30 'Alibaba.com Introduces Payment with PayPal on AliExpress', PayPal press release, Hong Kong & San José, 27 April 2010

31 'UPS Establishes Alliance with Alibaba.com', Alibaba Group press release, Atlanta & Hong Kong, 04 May 2010

32 'Alibaba.com Introduces Logistics Warehouse and Shipping and Logistics Management Services on AliExpress', Alibaba Group press release, Hong Kong, 18 January 2011

Alipay's main competitor is Tenpay, an online payment service provider with just under 80 million users. Tenpay processed 20.5% of all online payments in China in the first quarter of 2009, against Alipay's 51.2% share. Tenpay also focuses on micropayments in online gaming and industry verticals such as leisure travel and ticketing.

How does it work

Alipay is an escrow service[33]. Multi-channel payment options are available to Alipay users, including online bank transfer, cash, and direct debit solutions.

Fee structure

The fee structure for accessing Alipay services varies for domestic and international transactions. Alipay charges no service fees to buyers and sellers on Taobao's online marketplace (domestic). In the case of international transactions, the seller will pay service fees as a member of Alibaba.com which includes escrow services provided by Alipay.

Advantages

- Alipay provides a secure and trusted payment solution, facilitating online transactions in a large consumer market which has traditionally distrusted card payment systems.
- By enabling payment in local currency Alipay facilitates trade from China, opening a new marketing channel for international businesses and building brand awareness within China.

33 An escrow service is one in which a third party (or 'trustee') mediates the payment process. The trustee receives the money from the buyer and alerts the merchant that the money has been transferred. The buyer alerts the escrow company once goods have been received. At that moment the escrow company transfers the money to the seller. Consumers must first open an online account in order to access escrow services. Other providers include Moneybookers (international) and PayEx (Nordic region).

Disadvantages

- The International e-retailers wanting to capitalise on the e-commerce opportunities offered in China and to an increasing extent in other major markets in Asia must successfully leverage the diverse services offered by the Alibaba Group.

Online checkouts

How do they work?

Online checkout systems such as Google Checkout or Checkout by Amazon, are services which leverage existing credit/debit card and banking infrastructures to enable payments and online transactions. E-commerce retailers incorporate these online checkout tools as a payment option on their site, enabling consumers to access their existing details (online identities, addresses) and existing e-wallets payment information. Customers complete purchases quickly and conveniently, without ever leaving the e-retailer's website, thereby improving conversion rates for the e-retailer.

In addition to enabling the payment process, online checkouts provide e-retailers with payment protection policies against fraud-related chargebacks as these incorporate fraud detection capabilities, chargeback controls and risk management processes.

Online checkout options are fully-integrated into an e-retailers existing checkout flow, providing a seamless checkout experience for consumers. In addition the systems provide tools to handle shipping charges, sales tax, promotions, and post-sale activities including refunds, cancellations, and chargebacks, thereby facilitating payment management and control for the e-retailer.

Fee structure

The fees associated with these payment solutions vary with individual providers, but typically involve fixed and variable costs per transactions. The monthly transaction processing rates are calculated based on the previous month's sales volume. Some providers also charge a fixed monthly subscription fee for the service.

Additional fees may be charged in cross-border transactions. For example Google Checkout charges an additional 1% fee on transactions where the e-retailer is based in a different country to the consumer.

Advantages

- In addition to trust and security, online checkout systems offer a range of innovative services in online purchasing experiences. For example, Checkout by Amazon facilitates gift buying by allowing consumers to ship items in a single order to multiple addresses. The online checkout solutions are also optimised for mobile commerce, limiting the number of clicks required to complete transactions in a mobile environment.

- Smaller, less well-know e-retailers can access the trusted brand of internet giants such as Google and Amazon to attract new customers to their site.

- E-retailers can benefit from a 'customer-focused' payment policy. If Google already enjoys a relationship with an e-retailer through its AdSense and AdWords services, the e-retailer will benefit from waived or reduced fees from using Google Checkout.

Disadvantages

- E-retailers may not benefit from immediate network effects. They risk investing money, time and resources in an online checkout solution which is competing to grow the reach and ubiquity of their own solution. This is an important consideration in a market which includes established players such as PayPal.

Direct debit schemes

ELV

'Electronisches Lastschriftverfahren' ('electronic direct debit system'), or ELV, is a direct debit e-payment solution popular in Germany.

How does it work?

The system is based on the principle of a classic direct debit mandate. The consumer provides the e-retailer with a per-transaction authorisation to debit their account to the value of the goods or services purchased.

The mandate is completed on the e-retailer's website. The consumer simply enters his account number and authorisation code, and the e-retailer then transmits the debit request (including authorisation) to the consumer's bank. The bank then transfers the funds from the consumer's account to that of the e-retailer.

Whilst providing ease of use for the consumer, ELV can be a more risky alternative from the merchant's perspective. This is due to the way the payment method was set up by the German banking system. Consumer account balances are not checked by the bank prior to transferring the money to the merchant. Account validation is completed post factum, after the transfer has been completed and the merchant has received the money. If the consumer's bank balance turns out to be insufficient the bank will initiate a charge back to retrieve the money. At this stage the merchant has to refund the bank, pay the chargeback fee, and may well have already dispatched the goods.

To protect against fraud many e-retailers subscribe to bank account validation services. Examples include

- Pago ELV Check, which compares the submitted account data with a Germany-wide administered black-list

» InterCard completes a 4safe Check - an online check that verifies the account details entered against the following:

a) InterCard black list: information on 3.2 million bank accounts with an open charge back from a point of sale or internet purchase entries. Transactions initiated by account holders on the black list are immediately refused.

b) InterCard white list: holds approximately 31 million accounts and 40 million card numbers. If the account details are on the white list the following further checks are conducted.

c) Check digit: verifies the check digit (last digit of the account number) using the algorithm that was used by the bank during the assignment of the account number.

d) Repetition/Subsequence check: Verifies how many authorisations a shopper has within a set time frame using the same bank account or card number details.

e) Limit check: verifies if the shopper's spending amount exceeds the set limit. This is based on the bank account number of a customer and is counted per merchant.

A number of national schemes offer additional security through direct debit guarantees which allow for refund on occasion of non-delivery, faulty goods or goods not-as-specified.

Fee structure

Use of ELV is at no cost to consumers, other than their normal bank charges. Merchants offering ELV incur costs associated with normal banking charges including chargeback fees but also fees paid to Payment Service Providers who facilitate access to ELV or verification companies such as InterCard.

Advantages

- Ease of use for consumers
- No fees for consumers
- Secure for consumers

Disadvantages

- Open to potential fraud from the e-retailer's perspective
- Limited geographically to Germany

iDEAL and consumer-authorised bank transfer schemes

iDEAL is a direct debit e-payment scheme popular in the Netherlands. Launched in October 2005, iDEAL has witnessed exponential growth over the past years: in 2008 iDEAL processed 25 million transactions, cumulatively worth €2.1bn, an increase of 87% on the number of transactions of the previous year. In 2009 year-on-year growth was of 63%, for a total 45 million transactions.

iDeal is available to customers of the majority of Dutch banks, reaches some 97% of Dutch account holders and is accepted by 88% of major e-retailers trading in the Netherlands.

Due to iDEAL's success the Netherlands is one of the few countries where PayPal has not gained a foothold, either in usage level or preference. According to the 2010 Ernst & Young survey on online shopping in the Netherlands iDEAL has earned the confidence of Dutch consumers, with two-thirds (58%) in 2010 saying it was the most trustworthy[34].

Online bank transfer is also one of the main online payment methods in Belgium, Sweden and Norway and Finland. Bank transfers are also one of the most popular payment methods in Czech Republic, Hungary, Romania, Poland, Slovakia. In comparison with iDEAL, which is a multi-bank payment method based on automated credit transfer initiated at the merchant's website, in many markets such as Belgium and Finland online banking services are offered by individual banks. In Germany a similar solution to iDEAL exists, called Giropay, with the main difference that Giropay works strongly with peer-to-peer payment methods like PayPal, Moneybookers and Click2Buy. Similar solutions in other countries include e-Dankort in Denmark, Interac Online in Canada and eNets in Singapore.

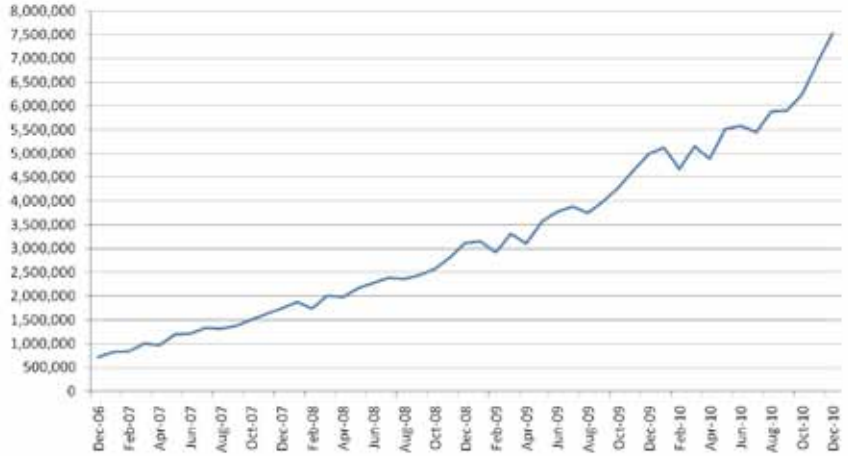
How does it work?

Like ELV, iDEAL enables consumers to buy securely online by debiting purchase amounts directly from their bank accounts. However unlike ELV, the consumer authorises the transfer of funds to the merchant directly with his bank, rather than authorising the merchant to seek the funds from his bank account.

This is a key differentiator: in this case (consumer requesting bank transfer), the bank will only honour the request if the consumer has sufficient funds available in his account to make the payment. If he does not, the bank will deny the request and the transaction is abandoned. This functionality means that iDEAL represents a much safer e-payments solution to merchants, while offering the same benefits to consumers.

34 ICT Barometer over online winkelen, Ernst & Young, Amsterdam, 28 April 2010, P. 13

Figure 9: evolution in iDEAL transactions per month, Dec 2006-Oct 2009



Fee structure

Free for consumers. A fee is charged to merchants.

Advantages

- Ease of use for consumers
- No fees for consumers
- A high level of security is provided by using a two-factor authentication (2FA) process, such as a challenge-response token based on the chip embedded in the ATM card. Furthermore, as the payment transaction takes place in the online banking environment, no sensitive financial information is shared with the merchant.

- iDEAL offers guaranteed payment to merchants as transactions are identified and authenticated in real-time. Buyers are not able to reverse a completed payment (charge back) after having authenticated the transaction personally through their online banking portal. For merchants and banks this eliminates fraud, costly losses and improves efficiencies in back office processes.

Disadvantages

- Limited to the Netherlands but looking to expand internationally.

- In cases of consumers changing their minds about a purchase, for which EU legislation affords them 14 days, they may not initiate a refund from their bank but must undertake due process with the e-retailer in order to recuperate monies.

Pre-paid cards

Prepaid cards play a small role in the European online shopping payment landscape, but are a popular online payment option in Eastern Europe and are extremely prevalent in the UK for offline purchases. Prepaid cards are a growing segment in the payment industry and are becoming more widely accepted online. PayPal accepts prepaid cards when opening PayPal accounts. In its Seventh Annual Prepaid Market Forecasts 2010 to 2013[35] the Mercator Advisory Group estimates that by the end of 2012 the value of the open-loop segment will have exceeded that of more traditional closed-loop cards.

Research conducted in 2010 by the Boston Consulting Group on behalf of MasterCard[36] forecasts that the total value loaded onto network branded prepaid cards in the US is expected to exceed US$440 billion by 2017, nearly four times its 2009 estimate. By 2017 the US will account for about 53% of the global branded prepaid card segment, more than twice the size of the next six leading markets, India, the UK, Mexico, Italy, Middle East and Brazil.

35 'Seventh Annual Prepaid Market Forecasts 2010 to 2013' by Tim Sloane, Mercator Advisory Group, September 2010

36 'Independent Research Forecasts that the European Open Loop Prepaid Market Will Reach $156bn (€127bn) by 2017', MasterCard press release, Waterloo, 03 June 2010

Boston Consulting Group estimates the value of funds loaded on to branded prepaid cards in Europe to reach US$156bn (€127bn) by 2017, up from the US$22bn (€18bn) in 2009. This represents an average annual increase of 26% per cent between 2010 and 2017.

It is expected that the UK will remain the largest market for prepaid cards in Europe, accounting for 25% of the entire European market by 2017, followed by Italy (20% by 2017). However, the highest growth rates of are expected in the less developed, more cash-based prepaid markets such as those of Eastern Europe[37].

How do they work?

Prepaid cards are targeted at different uses and segments eg: gift cards, travel money, teenagers and as payment method for underserved consumers groups. These cards are often co-branded and reloadable. In addition to loading cards at ATMs, users can typically, recharge their cards at third-party locations such as post-offices and selected retail outlets. Consumers are required to verify their identity and address but are not subject to credit checks when using prepaid cards.

Closed-loop prepaid cards are merchant-specific and used for transactions exclusively at that retailers (for example gift cards). Open loop or 'network-branded' prepaid cards enable cardholders to spend money which has been prepaid wherever the cards are accepted. Money is deducted for individual purchases until balances reach zero.

Fee structure

Prepaid cards are presented to consumers as a lower-cost alternative to credit or debit cards. While consumers may need to pay an initial fee for obtaining the cards many cards do not expire and can be used on an ongoing basis. Some cards carry monthly maintenance fees, although typically these will be lower than those charged on cards extending credit facilities. More flexible pricing models are emerging, such as a pay-as-you-go fee packages aimed at infrequent users of the card with higher per-transaction fees, or a fixed monthly fees where users are limited to a specified number of transactions per month for a fixed price.

37 ibid

E-retailers are subject to service charge fees when accepting payment by prepaid cards, as with debit and credit cards. Fees[38], set by the supporting network, are primarily determined by the card type, transaction type, issuing country and the geographic region where the transaction was undertaken. Also, card issuers make money from float and unused prepaid card balances.

Advantages

- Cards are accepted nationally and some cards are also accepted internationally as payment for online purchases.
- Prepaid cards bring unbanked consumers into the electronic payments system and provide them with a safe, convenient and relatively inexpensive way of accessing cash and making purchases.
- Prepaid cards provide consumers with security as no financial information is exchanged with online. Some prepaid card providers provide protection for money in cases where cards are lost.
- Consumers are able to control their spending within their selected limit.
- Prepaid cards broaden access to electronic payments by bringing in younger people as well as those who do not qualify for more traditional debit or credit cards. Prepaid cards are marketed to teenagers for shopping online without having their parents complete the transaction, or as a convenience for parents wishing to provide funds to children away from home.
- Privacy

Disadvantages

- Not accepted by all e-retailers
- Purchasers must have the cash up front

38 Fees include interchange fees paid by the merchant each time the card is used.

- Prepaid cards cannot be used for automatic monthly billing charges or payments
- Set-up fees are required
- Consumers need to track of account spending, often manually

Credit solutions

Forrester Research's limited study (trial of eight US e-retailers over a two-week period) on the impact of PayPal and Bill Me Later solutions on e-commerce in the US highlighted the following interesting findings:

- When Bill Me Later was added to a merchant site, Bill Me Later SoC ranged from 3% to 6% of total sales. Merchants believed that approximately one third of Bill Me Later sales were new sales.
- Merchants saw average order values increase by 20% to 40% with Bill Me Later.
- When PayPal was added as a payment option on a merchant site, PayPal's share of checkout (SoC) ranged from 6% to 12%. Merchants believed that approximately 10% to 30% of PayPal sales were new sales.

services PayPal makes available in the US and provides secure transactional credit arrangements for goods or services purchased online (or over the phone). Consumers are provided with credit through Bill Me Later's banking relationships on an individual transaction basis, unlike credit cards, which extend a revolving line of credit.

The turmoil of the financial crisis has caused something of an upset in the credit market, with on the one hand credit card companies tightening approval procedures and cutting credit limits, and on the other debt-strapped or debt-averse consumers abandoning credit cards altogether. Due to these joint pressures credit card use declined dramatically in the US in 2009. For example the Javelin Strategy Research study which surveyed 3,294 people in November 2009 reported a drop of 21 percentage points in the number of consumers who said they had used a credit card in the past month, from 87% in 2007 to 56% in 2009. This has led to greater use of debit payment methods, either directly from bank accounts, debit cards or pre-paid cards. However consumer need for credit remains, and alternative solutions such as Bill Me Later fill the credit gap.

Bill Me Later was acquired by eBay in 2008 and integrated into the PayPal "wallet" on certain e-retailer websites in 2009. Available only in the US, Bill Me Later is available at more than 1,000 e-merchants, catalogues and travel partners.

How does it work?

From the PayPal checkout platform consumers can select to pay for goods and services via a consolidated bill. Consumers can choose to settle either in part or in full. Consumers that sign up to Bill Me Later are subject to an initial credit check similar to those undertaken by credit card companies. To complete individual purchases consumers provide their birth date and the last four digits of their US social security number. Bill Me Later approves the credit for each transaction.

Fee Structure

Bill Me Later earns revenues from interest on the outstanding customer balances, fees for late payments and fees from merchants who use the Bill Me Later service.

Advantages:

- No need to register or create an account. Bill Me Later approves or denies transactions within three seconds
- No personal payment information provided

Disadvantages

- Limited reach: US only

Cash on delivery (COD)

Cash on delivery is of course possibly the oldest and most low-tech payment system around, and cannot at all be considered an e-payments solution insofar that no payment is made over the internet for goods purchased online. However it cannot be ignored as it is fairly widespread as a payment system for e-commerce: a 2008 consumer survey by Nielsen reported that 15% of global online consumers had used COD to pay for online purchases in the previous three months[39]. COD is also considered by some PSPs as a 'conversion booster' for domestic and, to a lesser extent, cross-border

39 AC Nielsen Trends in Online Shopping, February 2008

e-commerce, bringing into the world of online shopping whole new segments such as non-card holders, the unbanked, those with low trust thresholds in electronic payment systems, and those who prefer the perceived safety of physical cash and person-to-person transactions. Cash-on-Delivery is an important payment method in Central and Eastern European markets such as the Czech Republic, Hungary, Poland, Romania and Slovakia.

How does it work

As its name suggests, in the 'cash on delivery' payment method the consumer pays for goods upon their delivery to destination. Payment can be made by cash or card: in the latter case the payment method is more correctly referred to as 'card on delivery'. If the consumer does not want or is unable to pay for the goods upon their delivery they will not be handed over. In case of insufficient cash available or the addressee not being present goods can typically be collected from the local post office or the distribution centre of the delivering courier service upon payment.

The maximum COD amount allowed for shipments varies by country (eg €2k for contract customers and €1k for non-contract customers in the Netherlands; €3.5k or €5k in Germany, depending on the payment method and delivery service selected). For international shipments this maximum permitted amount depends on the country of the addressee. In Europe, the average time between delivery and collection of payment, and transfer to the e-retailer is about one week.

Fee structure

COD involves no fee for the consumer or processing or chargeback fee for the e-retailer. Financial institutions will charge fees for cash deposits and money transfers, which will ultimately be met by the e-retailer.

Advantages

A key advantage is that the payment risk is divided equally between sellers and buyers. If a buyer decides not to take and pay for the goods, the merchant faces only the costs for the COD service. If the buyer does not receive the goods, there is no payment to make. Some of the newer delivery services such as secure electronic parcel lockers incorporate facilities for COD payments. The parcels are only released for collection when the buyer pays by card at the locker terminal. Many delivery partners carry POS terminals which offer payment facilities.

Disadvantages

Although e-retailers avoid the fixed costs of credit card transactions and other alternative payment methods as well as well as the punitive chargeback fees when online payments need to be reversed, COD services incur higher variable costs than other online payment methods[40]:

- Labour costs associated with handling cash, as COD is more labour-intensive than other payment methods: it requires time to prepare cash register, reconcile cash payments at the end of the day and prepare deposits (although technology has increased the automation of cash-handling and reconciliation procedures the last years)[41].

- Fees by financial institutions as detailed above.

The complexity of COD services, both in terms of processes and liability, currently limit its availability across borders. From the consumer perspective the service is irreversible: after the payment has been made and the goods are received, the buyer cannot reverse the payment via the carrier. There is also the additional risk and responsibility for carriers, carrying and handling cash as well as basic human error in collecting payments.

40 Payment habits and trends in a changing e-landscape 2010+, Harry Leinonen, Bank of Finland, Helsinki 2008, p. 118

41 'Merchants' Costs of Accepting Means of Payment: Is Cash the Least Costly?' by Carlos Arango & Varya Taylor in Bank of Canada Review, Winter 2008-2009, Bank of Canada, Ottawa 2009, pp. 15-23

Alternative payment methods of the future

The increasingly complex multi-channel retailing world requires the integration of kiosk, mobile and social networks with stores, web and mail order channels and is driving the development of new payment methods. Paypal and Amazon are for example developing and rolling out more flexible payment methods and applications based on technologies that include features which facilitate micro-payments for digital goods but also offer greater flexibility, lower costs and increased security for payment of physical goods from any website connected to these new platforms.

The past few years have also seen massive strides in the technology behind handheld devices, the widespread uptake by consumers of a whole family of competing smartphones, and the online world – and e-commerce – increasingly going mobile. It is no wonder then that both m-commerce and m-payments are destined to grow massively in the future. A 2009 study by Arthur D Little[42] estimates the value of worldwide mobile payment transactions at around US$29bn in 2008. Mobile payment technology continues to gain ground around the world with the number of mobile payment users projected to have grown by 55% by the end of 2010 on 2009[43], equating to approximately 108.6 million people, up from 70 million in 2009.

The mobile payment market is fragmented with many different payment services and payment technologies. Mobile payment applications include mobile parking, mobile ticketing, mobile Point of Sales (POS), and mobile remittance.

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42 Global M-Payment Report Update – 2009. M-payments surging ahead: distinct opportunities in developed and emerging markets , Karim Taga & Gregory Oswald, Arthur D. Little, Vienna & Zurich, 2009

43 'Asia Pacific leads strong growth in mobile payments' by Matt Hamblen in www.computerworld.com, 21 June 2010

SMS is currently the dominant mobile payment technology. The Asia-Pacific region accounts for approximately 85% of the world mobile payment users[44], but areas such as Latin America, the Middle East and Africa are expanding faster (albeit from a lower base). Mobile payments, relying on simple technology, enable large segments of populations to access online goods and services who would otherwise be unable to. Think for example of those without a computer, home internet connection, or the unbanked. The use of pre-paid cards in mobile communications is already well established in developing countries.

Technologies such as Near Field Communications (NFC) (where a mobile user waves a phone over a wireless receiver connected to a pay terminal to make a payment) require individual banks to make their internet banking system accessible via wireless mobile technology. ESBG suggests this is happening in a fragmented way only and on a limited scale in Europe[45]. Third parties are required to manage customer authentication and aggregation and phones must contain a chip supporting this technology. The first mobile phone handset with fully integrated NFC technology embedded in its functionalities was launched by Nokia in 2007 (the Nokia 3161NFC)[46].

Cimbal, a San Francisco-based software company, recently launched an application which uses a two dimensional barcode that enables consumers to complete person-to-person payments, point of-sale transactions and online purchases[47]. The application's software turns a smartphone's camera into a scanner that reads barcodes displayed on another phone or a computer screen. Cimbal believe the application solves major issues with current mobile payment technology, such as eliminating the need for expensive chips in handsets and eliminating the cost to merchants in upgrading to terminals supporting contactless transactions.

In Autumn 2010 Jack Dorsey, co-founder of Twitter, launched 'Square' a new mobile payments tool initially targeted at small businesses in the US that may not offer credit card payment facilities[48]. To use the system a vendor must download the free Square application onto a smartphone and apply for a free plastic reader which plugs into the

44 Global Digital Economy: E-Commerce & M-Commerce Trends & Statistics by Budde, Baker, Bibolini et al, Paul Budde Communication Pty Ltd, Bucketty, Australia, October 2009, p. 46

45 The SEPA e-Payments Framework in the context of the greater e-Payments landscape, European Savings Banks Group, Brussels, June 2010

46 Near Field Communication, Nokia, Helsinki, 2007, p. 7

47 'Cimbal launches software-based NFC payment network', Cimbal, San Francisco, 31 August 2010

48 'Square: the mobile phone gadget that could revolutionise payments' by Emma Barnett, Daily Telegraph, 12 December 2010

phone's headphone socket. A consumer's card is swiped through the plastic square plug-in to process the sale and card information is read though the phone's microphone. The consumer signs using their finger on the touchscreen and chooses whether to receive their receipt via text or email. The vendor is charged a flat rate of 2.75% for every card transaction.

Postal initiatives in payment methods for e-commerce

In the following section we detail a number of e-payments services and solutions offered by posts. The objective is not to be exhaustive in detailing every single solution that is on offer, but to present a small selection that help illustrate the range of different approaches posts are adopting in the e-payments arena.

Several posts have begun to offer tailored online shopping payment solutions to their customers. The easiest entry point into the e-payments and e-commerce landscape for many posts is to leverage consumer financial product offerings and know-how, developing services on existing financial services platforms, including but not limited to online banking services and pre-paid payment cards: we look at Swiss Post for an example of the former, and examine the product range from Poste Italiane as an example of the latter. The potential for posts as key partners in the e-commerce value chain is enormous, and they enjoy the advantage of combining sophisticated last-mile delivery networks with consumer-facing services. Taking advantage of this unique position, many are developing e-commerce payment solutions based around the principle of consumer-issued payment at the point of delivery. We look at a variety of solutions in this area, including offline and online payment options.

Online banking solution – PostFinance by Swiss Post

Account holders at PostFinance, the Swiss postal bank, can choose to pay at over 3,500 e-retailers via online banking services, including debit cards and online banking transfer. PostFinance services are linked in with the payment service provider Ogone, providing its business customers access to a worldwide e-payment platform.

Major players as customers in online shopping:

In October PostFinance announced it would process payments for online purchases of Special.T, the tea machine system from Nestlé available in Switzerland and France. PostFinance will play an important part in distributing Special.T by processing the payment of all online purchases in Switzerland and France. Nestlé customers will be able to pay with major credit cards and local payment methods such as PostFinance Card or Carte Bleue in France.

The partnership with Nestlé will be expanded to include online shops of Nespresso, Nescafé Dolce Gusto and Editions Mondo. Nestlé will thus become the largest customer of PostFinance in terms of the processing of online purchases (e-payment).

Pre-paid cards – Postepay by Poste Italiane

Postepay is a range of prepaid card products launched in June 2006 in partnership with MasterCard.[49] As with for other pre-paid cards, a bank account with BancoPosta is not required. The product range includes:

- Postepay Standard: prepaid card for travel payments, daily expenditures and online shopping
- Postepay Twin: same functionality as standard plus the ability to receive money payments and can be used throughout the world
- Postepay NewGift: A prepaid gift card, which can be reloaded with up to €2,500 a year
- Postepay Moneygram Rewards: Can also be used to send money abroad by Moneygram money transfer in post offices, with 5% reduction on the normal Moneygram transfer fees

49 www.mastercard.com

- Postepay Postemobile: can also be used to withdraw money or to charge a mobile phone's prepaid card
- The Standard and NewGift prepaid card are similar to New Zealand Post's Loaded card, which was discussed in the Strategic Perspectives on Investigating Innovation.[50]

The pre-paid cards accepted worldwide can be reloaded in numerous locations including all post offices, ATM machines and Sisal shops in Italy, online at the Poste Italiane website and by SIM card, if the latter has been issued by Postemobile.

Payment at point of delivery

Payment methods services that allow consumers to pay at the point of delivery – whether online or offline – are starting to emerge into the e-payments landscape, primarily offered by postal companies on a national basis. These include but are not limited to cash on delivery (COD), and they can support the adoption of online shopping particularly among credit-adverse consumer segments and growing markets, such as in China and Eastern Europe. More innovative solutions offering the possibility of authorising online payments at the point of delivery are being developed by certain posts.

Terry Xie, Director of Mercator Advisory Group's International Advisory Service and principal analyst states that "cash-based alternative online payments – which allow consumers to shop online while paying offline – open the door to billions of consumers worldwide for equal access to the cost-savings, convenience and other benefits of online shopping. The market opportunities are astonishing over the long term. Those who build their brand awareness and customer loyalty in this market segment will benefit tremendously in competing for a share of the overall online payments market."[51]

The 2010 research report issued by the Mercator Advisory Group estimates that lost online sales opportunities from cash-dependent and cash-preferring consumers globally could be tens of billions of US dollars each year[52]. Alternative online payment services that allow consumers to buy online while paying with cash are quickly emerging as an effective way to allow grow online sales and provide more consumers with access to e-commerce. Broad distribution networks such as

50 Strategic Perspectives: Investigating Innovation, IPC, Brussels, March 2010, p. 7

51 'Spending cash online: alternative payment methods for e-commerce 2010', Mercator Advisory Group, Boston, 2010

52 ibid

those enjoyed by posts, targeting of key merchants, and reasonable consumer costs are identified as key success factors for cash-based alternative online payment services.

go&pay™ by An Post (Ireland)

go&pay™ is a service offered by An Post in partnership with allpay.net, a company providing payment services to public and private sector organisations. Consumers without a credit card or bank account can choose to order goods online, print a barcoded invoice and pay offline at participating post offices, either by cash or Laser card (an Irish debit card).

The service is offered in 1,000 post offices across Ireland and provides e-retailers a secure payment method as goods are dispatched after payment has been received. There are no subscription or ongoing maintenance fees when offering go&pay™ as a payment solution and An Post states that transaction fees are lower than for accepting payment with credit or debit cards[53]. Consumers also benefit from security as no personal or banking information is communicated to the merchant.

Online Rembours by TNT Post

TNT Post was scheduled to launch its 'Onine Rembours' service in the fourth quarter of 2010 which it claims will link payment and delivery in the e-commerce value chain, and thereby build trust with consumers[54]. TNT Post says that in practice it fills the gap between traditional COD services and online escrow services. Payment is made in advance, but to a trusted party. The money is only debited from the consumer's bank account after delivery confirmation.

Once a consumer selects 'Online Rembours' at checkout a secret delivery code is sent to the consumer via SMS or email. The consumer then pays the amount to TNT Post online. Upon receipt of payment TNT Post alerts the e-retailer who then dispatches the goods. Upon delivery the consumer enters the unique delivery code into the hand terminal to receive the goods. TNT Post transfers the money to the e-retailer after code verification.

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53 www.goandpay.ie

54 'TNT Post introduceert online rembours', by Ernst-Jan Hamel, www.digitallife.nl, 05 March 2010

The service provides additional guarantees for consumers if the e-retailer should not deliver the goods within 30 days. Under EU legislation if no product or service has been received after 30 days consumers are entitled to a full refund. In this eventuality, TNT initiates the payment reversal. By paying monies to a third party consumers know they will always get their money back in cases of non-delivery within legal timeframes.

For e-retailers the additional step of verifying the security code at the time of delivery eliminates cases of delivery to wrong addresses and reduces the risk of fraud: consumers cannot claim they never received the goods.

Cash On Delivery - Correos y Telegrafos (Spain)

Cash on Delivery (COD) services offered domestically by Correos can be combined with Registered Mail and other Correos products such as postal parcels and packets, Paquete Azul, Postal Exprés and Correos Prisma. Internationally, the service can be combined with the International Registered Mail and International Economy Parcel Delivery. Payment is not limited to cash but includes the ability to pay on account or by mail check ay any post office.

Figure 10: go&payTM process illustrated

Collect on Delivery - USPS

Collect on Delivery is available for domestic shipping using Express Mail, First-Class Mail, Priority Mail, and any Package Services or any Parcel Select service. USPS enables e-retailers to offer a service where consumers can pay for merchandise at the time of delivery. Consumers can pay with cash or a personal cheque, but only one form of payment may be used for a single mail piece. If the recipient pays the amount due by cheque payable to the sender USPS forwards the cheque to the merchant. If the recipient pays in cash USPS collects the money order fees from the recipient and sends a postal money order to the merchant. COD also gives the e-retailer the added security of insurance coverage against loss or damage of up to $1,000. The e-retailer must guarantee to pay any return postage, unless otherwise specified.

Regulatory initiatives & e-payments

The past few years have seen several regulatory initiatives in finance and payments landscape that will have a greater or lesser impact on the e-payments environment. On the whole, the effect of these regulatory provisions, legislative or otherwise, has been largely beneficial, whether intentionally or inadvertently.

Greater interoperability among payment systems is important to grow the cross-border e-commerce segment, to make it viable for merchants and attractive and hassle-free for consumers, and a number of important initiatives in this area have taken shape over the past year, including working towards a single European payments area, the introduction of the EU's financial services directive, and the creation of an international council of payment providers to work towards common standards. Provisions of recent legislation in the US regarding debit interchange fees may also have a positive effect on e-commerce.

Single European Payments Area – SEPA (Europe)

The 2002 Bolkestein Directive ensured that financial organisations could not charge any more for intra-European cross-border money transfers than for domestic transfers. Whilst this did not harmonise costs across Europe, by ensuring that consumers in any given EU state were charged the same for payments to anywhere in the EU as at home, it was the first step to creating a European payments environment. Efforts have continued to consolidate that European payments arena and indeed to work towards harmonisation.

Banks have been under pressure from EU policymakers to facilitate harmonisation of the European payments landscape and under the threat of legislation from the EU have self-regulated in this area, creating the European Payments Council in 2002, whose purpose is to support and promote the creation of the Single European Payments Area, or SEPA.

According to the EPC, SEPA is "the area where citizens, companies and other economic actors can make and receive payments in euro, within Europe, whether within or across national boundaries under the same basic conditions, rights and obligations, regardless of their location". In other words, SEPA aims to make all electronic payments within Europe equivalent to domestic electronic payments and in so doing harmonise payments systems across Europe. SEPA focuses

on three core areas of credit (SEPA credit transfer or SCT), debit (SEPA direct debit or SDD) and card payments (SEPA card framework or SCF), to ensure that all citizens and companies can have access to a single set of simple payment instruments. SEPA actually covers the currencies of all 27 EU member states and those of participating non-EU countries: Iceland, Liechtenstein, Norway, Switzerland and Monaco.

Creating a streamlined European payments system for consumers and businesses comes at a cost to banks. They lose considerable revenue from international transaction processing: Computerworld estimated that the average cost of sending €100 from one European country to another has dropped about ten-fold thanks to SEPA, from €23.63 to just €2.46, and in May 2007 the then EU Commissioner for the Internal Market Charlie McCreevy estimated SEPA saving European business an annual €100bn[55]. In addition, the up-front infrastructure costs to European banks are not insignificant, estimated at anything between €5bn and €10bn[56].

Banks are therefore in no hurry to push forward the full adoption of SEPA and are passing the buck somewhat back to the legislators, something that is clearly reflected by the EPC's position on next steps. According to the EPC website "the European banking industry has successfully delivered innovative and commonly applicable SEPA payment schemes and frameworks [and] it is now up to the political drivers of the SEPA initiative – EU governments, the European Commission and the European Central Bank – to facilitate the migration of bank customers to the new SEPA instruments".

The Payment Services Directive (Europe)

The EU's Payment Services Directive (PSD), which national governments were to have integrated into national legislation by 01 November 2009, is a legal framework established to harmonise European payment practices and legislation and remove some of the legal barriers to the completion of a single European payments area, such as refund rules. Whereas SEPA is a voluntary initiative of the banking industry (albeit created under great regulatory pressure), the PSD is a purely legislative initiative that serves to reinforce and indeed go beyond some of the provisions of SEPA.

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55 'SEPA programme to cut bank costs opens next month' by Peter Sayer, www.computerworld.com, December 2007

56 According to Cognizant, a business consultancy, total costs to banks for upgrading software to become fully SEPA-compliant could be in the region of €5bn (see www.cognizant.com), whereas TowerGroup consultancy estimates the required bank investment figure to be twice that, at €10bn (see: 'Banks foresee higher costs for SEPA than PSD', Euractiv, 24 July 2008)

The PSD covers the majority of electronic and non-cash payments, ranging from credit transfers, direct debits, card payments and money remittance to mobile and online payments. It does not however cover cash or cheque payments. Payments in any European currency are covered as long as the payment service providers for both the payer and the payee are located in one of the 30 countries of the EEA covered by the directive[57].

The PSD has introduced some important innovations in the payments industry in Europe, including:

- Greater transparency. Consumers must be given the key information before and after making a payment, including information on the payment service provider, features of the payment service (such as the procedure for giving consent), processing time, spending limits, charges and refund rights. This makes it easier for consumers to compare terms and conditions and choose the payment service that best meets their needs.

- Faster payments. The PSD obliges payment service providers to process payments within certain time limits clearly stated in advance. As of 01 January 2012 payments will have to be made by the end of the day following that of a payment order. Until then payment service providers will have up to three days. The recipient will have immediate access to the funds.

- Greater consumer protection. Consumers have the right to refunds for unauthorised debits, overcharged amounts or incorrect processing (eg payments claimed twice). Different conditions apply to the varying reimbursement claims.

Perhaps the most important innovation of the PSD from an e-commerce and e-payments perspective is the increased competition that the legislation brings into the European payments landscape. The PSD provides for companies other than banks (eg money remitters, retailers, phone companies, etc) to offer payment services. Together, banks, payment institutions and other payment bodies are all referred to as 'payment service providers'. The PSD allows any person or business to provide payment services as a 'payment institute' (PI). Individuals are limited to providing payment services domestically, but, critically for e-commerce, businesses can offer payment services across the 30 markets of the EEA. Non-payment services companies can apply for a PI licence that allows them to act as a 'hybrid payment institution'.

57 The European Economic Area comprises the 27 EU Member States and Iceland, Norway and Liechtenstein.

As a consequence of the PSD, as a report by Citigroup points out[58], open payment systems such as global card schemes will have to open to the new payment institutions that the legislation provides for. The impact of the PSD should not be underestimated: Citigroup calls it "the most significant piece of EU Financial Services legislation in relation to the payments market ever seen".

International Council of Payment Network Operators (International)

The International Council of Payment Network Operators (ICPNO) was established in 2008 to, in its own words "to create a framework that allows global interoperability of national networks which will provide national networks access to consumers and merchants on other national networks resulting in greater transactional volume for all networks"[59]. Simply put, to determine standards and rules to make transactions on participating payment methods compatible with one another and thereby enhance e-commerce. Among the areas the ICPNO works on are legal compliance; security; international settlement procedures; fee structures; exchange rate mechanisms and technology integration. Current ICPNO members are: Colombia ACH (PSE) (Colombia); Giropay (Germany); iDeal (Netherlands); Interac (Canada); Payo (UK), and Secure Vault Payments (United States). The interoperability of iDEAL and Giropay is planned for 2010. ICPNO cooperates with the European Payment Council (EPC), the body behind SEPA.

Finance Reform Act 2010 (US)

The 2010 US Finance Reform Act is a child of the global credit crunch and ensuing crisis that in the US saw the collapse of Lehmann Brothers and the bail out of GM. Among the goals of the bill are to enhance consumer financial protection, give regulators powers to liquidate failing financial firms whose collapse would threaten the US economy, and curb risk-taking by Wall Street.

An amendment to the bill – the so-called Durbin Amendment – may further promote e-payments and e-commerce. Under the Act the Federal Reserve will now get authority to limit interchange fees[60] and can cap the fees on debit cards (but not

58 The Payment Services Directive: An essential guide for financial institutions, Ruth Wandhöfer, Citibank, New York, September 2008

59 www.ipcno.com

60 Interchange fees are a key part of the pricing structure of credit and debit card transactions, the largest portion of costs merchant pay for processing credit and debit payments. These fees are indirectly paid by merchants to card issuers and in most countries are set by the credit and debit card

credit cards) to what is 'reasonable and proportional to the costs of the issuer or the payment network', estimated at a maximum of between seven and 12 cents per transaction. These new measures represent a huge cut in the interchange fee, which previously averaged 44 cents per transaction. The proposed reductions would align US interchange rates more closely with other countries, including those of the EU – both Visa and MasterCard cut interchange fees in Europe to 0.2% for intra-European cross-border transactions – and will make debit cards much more attractive for both merchants and consumers through the combination of lower processing fees and the possibility of offering discounts.

The significant reduction in interchange fees should benefit e-retailers and potentially translate to cheaper prices for consumers. Should the trend be for e-retailers to choose to pass on the savings from lower debit interchange fees to consumers shopping online, this is likely over the course of time to add a future incentive for consumers to shift away from credit onto debit, which may in turn accelerate further innovations in the US e-payments landscape. A cautionary note must however be sounded. Banks stand to lose significant revenue through the lowering of the interchange fees and are likely to try to recoup some of this lost revenue by applying additional fees to consumer and business clients. The effects that this will have on e-commerce is moot, but worth bearing in mind.

networks. Interchange is only part of the fee merchants pay for accepting a credit or debit card. The Internet Retailer Association in the US reports that payment processors add on their own fees that can amount to 1-2% of the value of the order for smaller online retailers. Big retailers get volume discounts and their total merchant fee can be in the range of 2%. Smaller merchants typically pay a total fee of 3-5%.

Conclusion

The online payments industry faces many complex challenges including technological capabilities, commercial relationships, regulation, and security considerations such as authentication and verification. Add to this the importance of coordination and interoperability of multiple parties with different and often competing interests for cross-border e-commerce to flourish. Contrasting solutions are being developed, for example where delivery is triggered by the approval of payment versus where payment is made upon delivery, reflecting the plurality of payments systems emerging around the globe. In addition, regulatory initiatives in world regions are both facilitating cross-border e-commerce and at the same time changing the payments landscape radically, allowing for the emergence of non-financial players in the payments sector, which also means that pricing models and fees in the payment industry are under pressure from non-banking competitors.

Multiple alternative payment methods have surfaced over the course of the past decade, requiring e-retailers with global ambitions to increase the number and variety of payment solutions they offer to capture the widest possible consumer and customer base. Companies such as PayPal have succeeded in leading developments across the world, however a truly global e-payments standard is yet to emerge. The chain of trust needs to be strengthened for the potential of e-commerce to be realised: consumers need e-payments to be easy, secure, and preferably denominated in their own currency when shopping cross border. Retailers operate in a fiercely competitive marketplace and therefore seek payment solutions that are cost-efficient, secure, consumer-friendly and reliable.

The emergence of non-financial actors in the payments industry is testament to how other players can enter markets to introduce disruptive solutions that meet consumer needs in different ways and change behaviour. As the payments industry evolves and innovates, posts will need to change to keep up with these market developments. Posts that currently provide payment services for e-commerce will need to ensure these are relevant and competitive, both for consumers and e-retailers, and develop new solutions as appropriate. Posts that do not currently offer e-payments solutions, or payments solutions for e-commerce, must think hard and critically about doing so in order to be able to remain relevant to customers and consumers given the changing market dynamics.

Posts are ideally placed to facilitate information flows along the e-retail chain and offer innovative, value-added business solutions to e-retailers. They should offer their e-retailer customers integrated payments and delivery solutions, perhaps with financial incentives to choose a one-stop-shop, that can create equity with the online shopper while providing e-retailers more streamlined business processes and payment security. They should also develop platforms that are flexible enough to integrate e-retailers' preferred third-party e-payments solutions into their delivery chains.

Posts cannot expect e-retailers to fit into postal processes but rather need to tailor their interfaces to meet customer needs: if they want to be taken seriously as delivery partners of choice they must offer their customers consumer-focused solutions. Posts can become key players in growing the e-commerce market and benefitting from that growth. A critical part of this will be evolving dynamically in the e-payments space. This will help them militate against the commodtisation of their position in the e-commerce value chain in the eye of both the e-retailer and the consumer.

IPC Publications and Products

IPC produces a range of publications and other resources that provide insights into the postal industry from a number of different perspectives.

Market Flash - A biweekly newsletter covering the latest news in the postal industry, from financial information to personnel actions

Green Flash - A quarterly newsletter that provides our readers with insights into the latest sustainability trends among postal operators worldwide.

Strategic Insights – Our series of think pieces that provide in-depth analyses of key issues in the industry.

Member-only Publications and Online Tools

Regulatory Flash - Monthly newsletter detailing the latest developments emerging in the international regulatory affairs.

Strategic Insights (Member-only Issues) - Each year, IPC produces several special editions of Strategic Insights focus on regulatory issues and other key topics.

IPC Strategic Perspectives on the Postal Market – This annual report provides a distillation of the cooperative market intelligence projects carried out between member postal operators and IPC throughout the preceding year.

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Global Postal Industry Report - A comprehensive yearly overview of the state of the postal industry.

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